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# REMARKS

This response is filed with a Request for Continuing Prosecution and is in response to the Final Office Action dated March 26, 2003.

Claims 1 to 15 and 20 to 43 remain in the application. Claim 11 has been amended to address the rejection under 35 U.S.C. 112. New claims 44 to 63 have been added. The Examiner's attention is drawn to the following remarks with respect to the claims.

### 35 U.S.C. 112 – Claims 1 and 8

The Examiner rejected claims 1 to 7, 8 to 10, 20 to 25, 40 and 41 under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification. The Examiner noted that independent claims 1 and 8 recite a method for determining the response of a gas-in-liquid concentration measuring device where a second mathematical function is determined which is representative of the response of the gas-in-liquid concentration measurement device when the concentration of the gas is above the solubility threshold. The Examiner indicated that there is no support in the original specification for such a method. Applicant respectfully disagrees.

Applicant submits that the application is clearly directed to a method for determining the response of a gas-in-liquid concentration measuring device when the concentration of the gas is above the solubility threshold. In particular, the Examiner's attention is directed to the following passages:

> Page 7, lines 1 to 5: "It has been determined, according to the present invention, that <u>a gas concentration measurement device will have a first response</u> in a liquid having a concentration of gas below the solubility threshold for that combination of gas and liquid and <u>a second response</u> in a liquid having a concentration of gas above the solubility threshold."

Page 7, lines 6 to 9: "Referring to Figure 1, a <u>response curve for a gas permeable membrane</u> is shown for a gas having a solubility threshold of, for example, 3% in a liquid. The gas permeable membrane was calibrated in air. <u>The curve was prepared according to one aspect of the present invention.</u>"

Page 9, lines 21 to 24: "The <u>device</u> is then used to make sufficient measurements of the gas concentration at known actual concentrations to permit the <u>generation of a first function representing the measured concentration versus the actual concentration below the solubility threshold</u>.

Page 10, lines 11 to 12: "The measured concentration at the solubility threshold can then be used to determine a <u>second function representative of the measured concentration versus the actual concentration in the region above the solubility threshold.</u>"

Page 11, lines 15 to 18: "A concentration response curve for a gas in water is shown in Figure 2. ... The measured <u>concentration response</u> curve is comprised of <u>a first portion 10 representative of a first function</u> and <u>a second portion 12 representative of a second function.</u>"

Page 11, lines 26 to 29: "According to the present invention, <u>concentration response curves and/or</u> correction factors can be obtained for any combination of gas and liquid and at a plurality of conditions, such as various temperature and/or pressure conditions. "

Thus, clearly the application supports claiming a method for determining the response of a gas-in-liquid concentration measurement device by generating a first mathematical function and using that first mathematical function to generate a second mathematical function representative of the device response in the region above the solubility threshold where it is otherwise so difficult to obtain device measurements. This response is evidenced in Figures 1 and 2, for example. While the specification also teaches another aspect of the invention relating to obtaining a correction factor for use with a gas-in-liquid concentration measuring device, that method is an application of

the core method taught by the application, which is determining the response of a device for measuring gas-in-liquid concentrations. Therefore, favorable consideration and withdrawl of the new matter rejection of claims 1 and 8 is respectfully requested.

## 35 U.S.C. 112 – Claim 11

Claim 11 was rejected under 35 U.S.C. 112, second paragraph, as being indefinite. The claim has been amended to recite "a method for using a concentration determining device". It is submitted that this language more clearly defines the intent of the claim and its dependent claims. Favorable consideration is respectfully requested.

## Allowed Claims and New Claims

The Examiner indicated that claims 14, 15, 33 to 39 and 43 were allowed. In particular, the Examiner indicated that the rejections regarding the prior art were withdrawn with respect to claims 11 and 13 to 15 since neither Yokoyama et al nor Ledez et al teaches obtaining a correction factor using a first and second mathematical function to be used in determining the concentration of a gas in a liquid.

Applicant submits that with the amendment to clarify claim 11, claims 11 to 13, 26 to 32 and 42 should also now be allowable.

New independent claims 44 and 53 are based on original claims 1 and 8, respectively, and claim a method for obtaining a correction factor using a first and second mathematical function, the correction factor to be used in determining the concentration of a gas in a liquid. Since these claims and their dependent claims 45 to 52 and 54 to 63 teach methods for obtaining a correction factor not taught in the cited prior art, it is submitted that these claims should also be allowable.
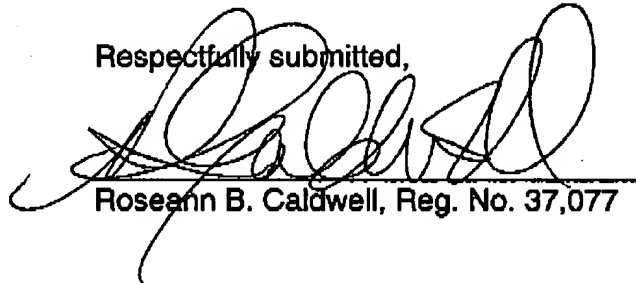
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## Conclusions

In view of the foregoing, applicant submits that claims 1 to 15 and 20 to 63 are in a condition for allowance. Favorable consideration is respectfully requested.

Respectfully submitted,

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